

## DAFTAR PUSTAKA

- Aldridge IY, Chmurny AB, Durham DR, Roberts RL, Fan LD. 1994. Proteases to Inhibit and Remove Biofilm. *European patent*. 590-746.
- Andersen AS, Sandvang D, Schnorr KM, Kruse T, Neve S, Joergensen B, *et al.* 2010. A novel approach to the antimicrobial activity of maggot debridement therapy. *Journal of Antimicrobial Chemotherapy*. 65:1646-1654.
- Anjarwati DU, Nuryastuti T, Riwanto I, Wahyono H. 2017. Effects of *Chloroprocta* sp. Maggot Filtrates on Extracellular Matrix Reduction and Embedded *Staphylococcus Epidermidis* Viability. *Malaysian Journal of Microbiology*. 13(3):235-243
- Anjarwati DU, Setiawati, Mujahida, Hapsari R, Nuryastuti T. 2014. In Vitro Effect of *Chloroprocta SP.* Maggots Secretion on *Staphylococcus epidermidis* Biofilm and the Expression Level *icaA* of Gene. *Indonesian J. Pharm.* 25(2):76-83. Diakses dari <http://indonesianjpharm.farmasi.ugm.ac.id/index.php/3/article/view/258> tanggal 30 Juli 2019
- Atmaja DS, Wuryanti, Anam K. 2013. Isolasi, Purifikasi dan Karakterisasi  $\alpha$ -Amilase dari *Trichoderma viride* FNCC 6013. *Chem Info*. 1: 85-93
- Arciola CR, Baldassarri L, Montanaro L. 2001. Presence of *icaA* and *icaD* genes and slime production in a collection of staphylococcal strains from catheter-associated infections. *Journal of Clinical Microbiology*. 39:2151–6.
- Bechinger B, Gorr SU. 2017. Antimicrobial Peptides: Mechanisms of Action and Resistance. *Journal of Dental Research*. 96(3) 254–260
- Bexfield A, Bond E, Roberts EC, Dudley E, Nigam Y, Thomas S, *et al.* 2008. The antibacterial activity against MRSA strains and other bacteria of a <500 Da fraction from maggot excretions/secretions of *Lucilia sericata* (Diptera: Calliphoridae). *Microbes and Infection*. 10: 325- 333.
- Bexfield A, Nigam Y, Thomas S, Ratcliffe NA. 2004. Detection and partial characterisation of two antibacterial factors from the excretions/secretions of the medicinal maggot *Lucilia sericata* and their activity against methicillinresistant *Staphylococcus aureus* (MRSA). *Microbes Infect.* 6:1297-304
- Bohova J, Majtan J, Majtan V, Takac P. 2014. Selective Antibiofilm Effects of *Lucilia sericata* Larvae Secretions/Excretions against Wound Pathogens. *Evidence-Based Complementary and Alternative Medicine*. 1-9
- Brisou JF. 1995. Biofilms, Methods for Enzymatic Release of Microorganisms. *CRC Press Inc.* Boca Raton, Fla.

- Budiarto E. 2002. Pengujian Chi Square. *Biostatistika untuk kedokteran dan kesehatan masyarakat*.
- Cazander G, Veen KEv, Bouwman LH, Bernards AT, Jukema GN. 2008. The Influence of Maggot Excretions on PAO1 Biofilm Formation on Different Biomaterials. *Clinical Orthopaedics and Related Research*. 467(2): 536-545
- Cerovsky V, Bem R. 2014. Lucifensins, the Insect Defensins of Biomedical Importance: The Story behind Maggot Therapy. *Pharmaceuticals Journal*. 7:251-264
- Čeřovský V, Slaninová J, Fučík V, Monincová L, Bednářová L, Maloň P, Štokrová J. 2011. Lucifensin, a novel insect defensin of medicinal maggots: Synthesis and structural study. *ChemBioChem*. 12:1352–1361
- Chaignon P, Sadovskaya I, Ragunah C, Ramasubbu N, Kaplan JB, Jabbouri S. 2007. Susceptibility of Staphylococcal Biofilms to Enzymatic Treatments Depends on Their Chemical Composition. *Appl Microbiol Biotechnol*. 75: 125-132.
- Charlotte J, Falholt P, Gram L. 1997. Enzymatic Removal and Disinfection of Bacterial Biofilms. *Applied and Environmental Microbiology*. 63(9): 3724-3728.
- Davies D. 2003. Understanding Biofilm Resistance to Antibacterial Agents. *Nature Review Drugs Discovery*. 2:114-122. Diakses dari <https://www.nature.com/articles/nrd1008> tanggal 30 Juli 2019
- Dumville JC, Worthy G, Bland JM et al. 2009. Larval Therapy for Leg Ulcers (VenUS II): Randomised Controlled Trial. *British Medical Journal*. 338(b):773.
- Fey DP, Olson ME. 2011. Current Concept in Biofilm Formation of Staphylococcus Epidermidis. *Future Microbiol*. 5(6):917-933
- Gottrup F, Jørgensen B. 2011. Maggot Debridement: An Alternative Method for Debridement. *ePlasty*. 11:e33
- Hames BD. 1998. Gel Electrophoresis of Proteins. New York (USA): Oxford university press
- Harris LG, Bexfield A, Nigam Y, Rohde H, Ratcliffe NA, Mack D. 2009. Disruption of Staphylococcus epidermidis biofilms by medicinal maggot *Lucilia sericata* excretions/secretions. *The International Journal of Artificial Organs*. 32(9): 555-564.
- Harris LG, Nigam Y, Sawyer J, Mack D, Pritchardc DI. 2013. *Lucilia sericata* Chymotrypsin Disrupts Protein Adhesin-Mediated Staphylococcal Biofilm Formation. *Applied and Environmental Microbiology*. 79(4): 1393-13955

- Hidayati R, Anjarwati DU, Fareza MS, Asnani A. 2019. Studi in Vitro Biofilm *Enterococcus faecalis* pada Pemberian Kombinasi Ekstrak *Maggot Chrysomya megacephala* dan Natrium Hipoklorit. *Journal Unpublish*
- James p, O'gara. 2007. Ica and Beyond: Biofilm Mecanism and Regulation in *Staphylococcus epidermidis* and *Staphylococcus aureus*. *FEMS Microbiol Lett.* 270(2):179-188. Diakses dari <https://www.ncbi.nlm.nih.gov/pubmed/17419768> tanggal 2 Agustus 2019
- Jawetz M, Adelberg's. 2010. *Mikrobiologi Kedokteran*. Buku Kedokteran. EGC. Jakarta
- Kemenkes RI. 2011. *Pedoman Pelayanan Kefarmasian Untuk Terapi Antibiotik*. Jakarta : KEMENKES RI
- Kemenkes RI. 2017. *Peningkatan Pelayanan Kefarmasian Dalam Pengendalian Resistensi Antimikroba*. Jakarta : Kemenkes RI
- Leroy C, Delbarre C, Ghillebaert F, Compere C, Combes D. 2008. Effects of Commercial Enzymes on the Adhesion of a Marine Biofilm-Forming Bacterium. *Biofouling*. 24(1): 11-22.
- Lewis K. 2001. Riddle of Biofilm Resistance. *Antimicrobial Agents and Chemotherapy*. 45:100-107
- Li Z, Mao R, Teng D, Hao Y, Chao H, Chen L, Wang X, Wang X, Yang A, Wang J. 2017. Wangi Antibacterial and immunomodulatory activities of insect defensins-DLP2 and DLP4 against multidrug-resistant *Staphylococcus aureus*. *Scientific Reports*. 7:12124
- Ma Y, Xu Y, Yestrepsky BD, Sorenson RJ, Chen M, Larsen SD, Sun H. 2012. Novel Inhibitors of *Staphylococcus aureus* Virulence Gene Expression and Biofilm Formation. *PLoS One*. 7(10). Diakses dari <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3471953/> pada tanggal 14 september 2020
- Mahardhika SG, Anjarwati DU, Rujito L. (2019). Perbandingan Gen *ica* A/D pada Methicilin Resistant *Staphylococcus aureus* (MRSA) Penghasil Biofilm Antara Tenaga Kesehatan di Rumah Sakit dengan Masyarakat Umum di Banyumas. *Journal Unpublished*
- Majerczyk CD, Sadykov MR, Luong TT, Lee C, Somerville GA, Sonenshein. 2008. *Staphylococcus aureus* CodY Negatively Regulates Virulence Gene Expression. *Journal of Bacteriology*. 190: 2257–2265
- Mirzaee Mohsen, Shahin Najar Peerayeh, Abdol-Majid Ghasemian. 2014. Detection of *icaABCD* Genes and Biofilm Formation in Clinical Isolates of Methicillin Resistant *Staphylococcus aureus*. *Iranian Journal of Pathology*. Vol 9 (4), 257 – 262



- Myers PR, Espinosa CS, Parr T, Jones GS, Hammond, Dewey TA. 2019. *Chrysomya*. The Animal Diversity Web (online). Museum of Zoology University of Michigan. Diakses dari <https://animaldiversity.org>. tanggal 16 Oktober 2019
- Nasr RA, Hala MA, Hussein SH. 2012. Biofilm Formaton and Presence of icaAD Gene in Clinical Isolates of Staphylococci. *The Egyptian Journal of Medical Human Genetics*. 13: 269–274. Diakses dari <https://www.ajol.info/index.php/ejhg/article/view/81938/72091> tanggal 20 September 2019
- Otto M. 2008. Staphylococcal biofilms. *Curr Top Microbiol Immunol*. 322: 207–228
- O'Toole G, Kaplan HB, Kolter R. 2000. Biofilm Formation As Microbial Development. *Annual Review of Microbiology*. 54:49-79. Diakses dari <https://www.annualreviews.org/doi/10.1146/annurev.micro.54.1.49> tanggal 20 September 2019
- Parnes A, Lagan KM. 2007. Larval Therapy in Wound Management. *International Journal of Clinical Practice*. 61:488-4893.
- Permenkes RI Nomor 27 Tahun 2017. *Pedoman Pencegahan dan Pengendalian Infeksi di Fasilitas Pelayanan Kesehatan*. Jakarta : Mentrri Kesehatan Republik Indonesia
- Permenkes RI Nomor 8 Tahun 2015. *Program Pengendalian Resistensi Antimikroba di Rumah Sakit*. Jakarta : Mentrri Kesehatan Republik Indonesia
- Plas MJAvd, Jukema GN, Wai S-W, Dogterom-Ballering HCM, Lagendijk EL, Gulpen Cv, et al. 2008. Maggot Excretions/Secretions are Differentially Effective against Biofilms of Staphylococcus aureus and Pseudomonas aeruginosa. *Journal of Antimicrobial Chemotherapy*. 61:117-22.
- Pratiwi ST. 2008. Mikrobiologi Farmasi. Erlangga. Jakarta
- Prakash B, Veeregowda BM, Krishnappa G. 2003. Biofilms: A Survival Strategy of Bacteria. *Current Science*. 85(9): 1299-1307.
- Primahatmaja B, Sardjono TW, Lestari N. 2014. *Perubahan Kecepatan Pertumbuhan Larva Lalat Chrysomya sp. pada Bangkai Tikus yang Mengandung Berbagai Kadar Morfin*. Majalah Kesehatan FKUB. Vol 1 Nomor 4. Malang.
- Purbowati R. 2016. Hubungan Biofilm Dengan Infeksi : Implikasi Pada Kesehatan Masyarakat dan Strategi Mengontrolnya. *Jurnal Ilmiah Kedokteran*. 5(1):1-14

- Rabin N , Zheng Y , Temeng CO , Du Y , Bonsu E , Sintim HO. 2015. Biofilm Formation Mechanisms and Targets for Developing Antibiofilm Agents. *Future Med Chem.* 7(4): 493-512.
- Rachmawati D, Kuntaman, Alimsardjono L. 2019. The Correlation Between icaA And icaD Genes With Biofilm Formation *Staphylococcus epidermidis* In Vitro. *Fol Med Indones.* Vol 55 (4), 251-259
- Sarah EC, Christiane G, Norbert FS, Wright WN, Friedrich GO. 1999. The Intercellular Adhesion (ica) Locus Is Present in *Staphylococcus aureus* and Is Required for Biofilm Formation. *American Society for Microbiology.* 67(10): 5427–5433
- Sastrosupadi A. 2000. *Rancangan Percobaan Praktis Bidang Pertanian.* Yogyakarta: Kanisius
- Satorres SE, Alcaraz LE. 2007. Prevalence of icaA and icaD genes in *Staphylococcus aureus* and *Staphylococcus epidermidis* strains isolated from patients and hospital staff. *Cent Eur J Public Health.* 15(2):87–90.
- Sherman RA. 2002. Maggot Versus Conservative Debridement Therapy for the Treatment of Pressure Ulcers. *Wound Repair and Regeneration.* 10(4):208–214.
- Sinaga, E. 2004. *Infeksi Nosokomial dan Staphylococcus epidermidis.* EGC. Jakarta
- Syaruhrahman A, Chatim A, Soebandrio A, Karuniawati A, Santoso A, Harun B. 2010. *Buku Ajar Mikrobiologi Kedokteran.* Edisi Revisi. Binarupa Aksara Publisher. Jakarta
- Thallinger B, Prasetyo EN, Nyanhongo GS, Guebitz GM. 2013. Antimicrobial enzymes: An emerging strategy to fight microbes and microbial biofilms. *Biotechnology Journal.* 8:97-109.
- Tjay, Hoan T, Rahardja, Kirana. 2007. *Obat-obat Penting.* PT Elex Media Komputindo. Jakarta
- Tu Quoc PH, Genevau P, Pajunen M, Savilahti H, Georgopoulos C, et al. 2007. Isolation and Characterization of Biofilm Formation-defective Mutants of *Staphylococcus aureus*. *Infect Immun.* 75: 1079–1088
- Wiatr CL. 1990. Application of Cellulase to Control Industrial Slime. *U.S. patent.* 4: 936-994.
- World Health Organization (WHO). 2013. *Antibiotic Resistance Threats in the United States.* US Department of Health and Human Services. USA
- Xavier JB, Picoreanu C, Loosdrecht MCMv, Rani SA, Stewart PS. 2005. Biofilm-control strategies based on enzymic disruption of the extracellular polymeric substance matrix – a modelling study. *Microbiology.* 151:3817-3832.

- Ziebuhr W, Heilmann C, Gotz F, Meyer P, Wilms K, Straube E, Hacker J. 1999. Detection of the intercellular adhesion gene cluster (ica) and phase variation in *Staphylococcus epidermidis* blood culture strains and mucosal isolates. *Infect Immun.* 65: 890–896.
- Zhou S, Chao X, Fei M, Dai Y, Liu B. 2013. Analysis of *S. Epidermidis* icaA and icaD genes by polymerase chain reaction and slime production: a case control study. *BMC Infectious Disease.* 13: 242

